CONTENTS OF VOLUME 29

Vol 29, No. 1

DIRECTED ISSUE: MECHANISMS IN TISSUE REPAIR

1 Editorial

3 Preface

Introductory Overview

Steven E. Mutsaers, Jill E. Bishop, Gus McGrouther and **Geoffrey J. Laurent** — 5 Mechanisms of tissue repair: from wound healing to fibrosis

Reviews

Alexis Desmoulière, Chérif Badid, Marie-Luce Bochaton-Piallat and **Giulio Gabbiani** — 19 Apoptosis during wound healing, fibrocontractive diseases and vascular wall injury

Karl T. Weber, Yao Sun and **Laxmansa C. Katwa** — 31 Myofibroblasts and local angiotensin II in rat cardiac tissue repair

J. P. Iredale — 43 Tissue inhibitors of metalloproteinases in liver fibrosis

A. M. El Nahas, E. C. Muchaneta-Kubara, M. Essawy and **O. Soylemezoglu** — 55 Renal fibrosis: insights into pathogenesis and treatment

Sharon O'Kane and **Mark W. J. Ferguson** — 63 Transforming growth factor βs and wound healing

T. J. Franklin — 79 Therapeutic approaches to organ fibrosis

Robert K. Andrews, José A. López and **Michael C. Berndt** — 91 Molecular mechanisms of platelet adhesion and activation

Richard P. Marshall, Robin J. McAnulty and **Geoffrey J. Laurent** — 107 The pathogenesis of pulmonary fibrosis: is there a fibrosis gene?

Original Papers

Phil Stephens, Paul G. Genever, Edward J. Wood and **Michael J. Raxworthy** — 121 Integrin receptor involvement in actin cable formation in an *in vitro* model of events associated with wound contraction

B. Prakash Kumar, K. Shivakumar and **C. C. Kartha** — 129 Magnesium deficiency-related changes in lipid peroxidation and collagen metabolism *in vivo* in rat heart

Elena G. Hitraya, Sergio A. Jimenez, Anna Ludwicka, Richard M. Silver and **John Varga** — 135 Increased activity of the α1(I) procollagen promoter in skin fibroblasts from patients with chronic eosinophilia-myalgia syndrome

Arvinder K. Dhalla, Jagan C. Kandala, Karl T. Weber and **Ramareddy V. Guntaka** — 143 Identification of negative and positive regulatory elements in the rat α1(I) collagen gene promoter

Ken S. Frazier and **Gary R. Grotendorst** — 153 Expression of connective tissue growth factor mRNA in the fibrous stroma of mammary tumors

K. Moore, A. Thomas and **K. G. Harding** 163 Iodine released from the wound dressing iodosorb modulates the secretion of cytokines by human macrophages responding to bacterial lipopolysaccharide

J. M. W. Quinn, Y. Fujikawa, J. O'D. McGee and **N. A. Athanasou** 173 Rodent osteoblast-like cells support osteoclastic differentiation of human cord blood monocytes in the presence of M-CSF and 1,25 dihydroxyvitamin D_3

Sandrine Lorimier, Sylvie Bouthors, Chantal Droulle, Dominique Laurent Maquin, François-Xavier Maquart, Philippe Gillery, Hervé Emonard and **William Hornebeck** 181 The rate of fibrinolysis is increased by free retraction of human gingival fibroblast populated fibrin lattices

Ian A. Darby, Teresa Bisucci, Tim D. Hewitson and **Donald G. MacLellan** 191 Apoptosis is increased in a model of diabetes-impaired wound healing in genetically diabetic mice

David C. West, David M. Shaw, Peter Lorenz, N. Scott Adzick and **Michael T. Longaker** 201 Fibrotic healing of adult and late gestation fetal wounds correlates with increased hyaluronidase activity and removal of hyaluronan

R. G. Paul, J. F. Tarlton, P. P. Purslow, T. J. Sims, P. Watkins, F. Marshall, M. J. Ferguson and **A. J. Bailey** 211 Biomechanical and biochemical study of a standardized wound healing model

C. Laurent and **S. Hellström** 221 Extracellular matrix components reflect the dynamics of a healing tympanic membrane perforation – a histochemical study

Michael R. Schäffer, Udaya Tantry, Gretchen M. Ahrendt, Hannah L. Wasserkrug and **Adrian Barbul** 231 Stimulation of fibroblast proliferation and matrix contraction by wound fluid

Breda Cullen, Derek Silcock, Laura J. Brown, Anna Gosiewska and **Jeffrey C. Geesin** 241 The differential regulation and secretion of proteinases from fetal and neonatal fibroblasts by growth factors

Arturo Diaz and **Sergio A. Jiménez** 251 Interferon-gamma regulates collagen and fibronectin gene expression by transcriptional and post-transcriptional mechanisms

Györgyi Talas, Titus S. T. Adams, Mark Eastwood, Guillermo Rubio and **Robert A. Brown** 261 Phenytoin reduces the contraction of recessive dystrophic epidermolysis bullosa fibroblast populated collagen gels

Vol 29, No. 2

Molecules in Focus
Gordon W. Stewart 271 Stomatin

Annie Rowe 275 Retinoid X receptors

Review
Giampietro Ramponi and **Massimo Stefani** 279 Structural, catalytic, and functional properties of low M_r phosphotyrosine protein phosphatases. Evidence of a long evolutionary history

General Papers
Shingo Tsuyama, Yumiko Inoue and **Mikayo Tanaka** 293 ADP-ribosylated actin as part of the actin monomer pool in rat brain

Tomomi Shimizu, Mizohiro Imai, Shin Araki, Kei Kishida, Yasushi Terasawa and **Akira Hachimori** 303 Some properties of inorganic pyrophosphatase from *Bacillus subtilis*

Larry J. Takemoto 311 Changes in the C-terminal region of alpha-A crystallin during human cataractogenesis

Steven Hankin, A. Katrine Winterø and **Alexander G. McLennan** 317 Molecular cloning of diadenosine tetraphosphatase from pig small intestinal mucosa and identification of sequence blocks common to diadenosine polyphosphate hydrolases and phosphorylases

C. Stan Tsai 325 Molecular modelling studies of lysozyme catalysed hydrolysis of synthetic substrates

Silvia Billi de Catabbi, Norma Sterin-Speziale, María C. Fernández, Carolina Minutolo, Carmen Aldonatti and **Leonor San Martín de Viale** 335 Time course of hexachlorobenzene-induced alterations of lipid metabolism and their relation to porphyria

Hiroshi Doi and **Misako Kawakami** 345 Purification of aminopeptidase from Australian classified barley flour

Abderramane Kouadri-Boudjelthia and **Jean M. Wallach** 353 Hydrophobic interactions are involved in the inhibition of human leukocyte elastase by alkyltrimethylammonium salts

Antonio Tovar, Amelia Sánchez-Capelo, Jesus D. Galindo, Asunción Cremades and **Rafael Peñafiel** 361 Antiandrogenic effect of RU-486 in the mouse kidney

S. L. Khawar, K. Watson and **G. L. Jones** 367 A comparative electrophoretic analysis of mammalian hair and avian feather proteins

Astrid Nilsson, Gunhild Trøen, Lizette B. Petersen, Sjur Reppe, Kaare R. Norum and **Rune Blomhoff** 381 Retinyl ester storage is altered in liver stellate cells and in HL60 cells transfected with cellular retinol-binding protein type I

Book Reviews 391

Vol 29, No. 3

Molecules in Focus

Sharad Kumar 393 The apoptotic cysteine protease CPP32

Margaret L. Hibbs and **Ashley R. Dunn** 397 *Lyn*, a *src*-like tyrosine kinase

Reviews

Sharon K. Powell and **Hynda K. Kleinman** 401 Neuronal laminins and their cellular receptors

J. Justin Hsuan and **Siow Khoon Tan** 415 Growth factor-dependent phosphoinositide signalling

General Papers

K. Kimura 437 Mechanisms of active oxygen species reduction by non-steroidal anti-inflammatory drugs

Rodney F. Minchin and **Roger L. Martin** 447 Extracellular calcium stimulates Na^+-dependent putrescine uptake in B16 melanoma cells

Kunio Ohyama, Ryoko Suzuki, Hajime Watanabe, Shun Hirakawa and **Toshio Yamakawa** 455 Presence of *Vicia graminea* lectin- and *Vicia unijuga* lectin-binding (Vgu) glycoprotein in human amniotic fluid and some of its chemical and serological properties

Paula J. M. Vossebeld, Christa H. E. Homburg, Dirk Roos and **Arthur J. Verhoeven** 465 The anti-FcγRIII MAb 3G8 induces neutrophil activation via a cooperative action of FcγRIIIb and FcγRIIa

Piotr Laidler and **Anna Litynska** 475 Arylsulfatase A from human placenta possesses only high mannose-type glycans

Jesús Mingorance, Luis Alvarez, María A. Pajares and **José M. Mato** 485 Recombinant rat liver *S*-adenosyl-L-methionine synthetase tetramers and dimers are in equilibrium

Susana G. Afonso, Rafael Enriquez de Salamanca and **Alcira Batlle** 493 Folding and unfolding of δ-aminolevulinic acid dehydratase and porphobilinogen deaminase induced by uro- and proto-porphyrin

Daniel A. Sáenz, Mónica S. Chianelli, Carlos A. Stella, James R. Mattoon and **Eugenia H. Ramos** 505 RAS2/PKA pathway activity is involved in the nitrogen regulation of L-leucine uptake in *Saccharomyces cerevisiae*

Wen-Shuz Yeow, Manfred W. Beilharz and **C. May Lai** 513 The *in vitro* expression patterns of individual type I interferon genes in Newcastle disease virus infected murine splenocytes and fibroblasts

Anna Clouter and **Roy J. Richards** 521 Extracellular biotransformation potential in mouse airways

Teresa Martínez-Merlos, Rafael Cañedo-Merino and **Mauricio Díaz-Muñoz** 529 Ryanodine receptor binding constants in skeletal muscle, heart, brain and liver of the Mexican volcano mouse (*Neotomodon alstoni alstoni*; Rodentia: Cricetidae). Comparison with five other rodent species

Angel Catalá and **Augusto Cerruti** 541 Non-enzymatic peroxidation of lipids isolated from rat liver microsomes, mitochondria and nuclei

Book Reviews 547

Vol 29, No. 4

Molecules in Focus

Lorenzo A. Pinna 551 Protein kinase CK2

Bjorn R. Olsen 555 Collagen IX

Review

Manuel Arellano and **Sergio Moreno** 559 Regulation of CDK/cyclin complexes during the cell cycle

General Papers

Akifumi Mizutani, Nobuaki Nakagawa, Kiyotaka Hitomi and **Norihiro Tsukagoshi** 575 Ascorbate-dependent expression of ubiquitin genes in guinea pigs

Dmitri Sviridov, Takayuki Sasahara, Louise E. Pyle, Paul J. Nestel and **Noel H. Fidge** 583 Antibodies against high-density lipoprotein binding proteins enhance high-density lipoprotein uptake but do not affect cholesterol efflux from rat hepatoma cells

Richard I. Christopherson 589 Partial inactivation of chorismate mutase-prephenate dehydrogenase from *Escherichia coli* in the presence of analogues of chorismate

Carminita L. Frost, Ryno J. Naudé, Willem Oelofsen and **Koji Muramoto** 595 Purification and partial characterization of an ostrich α_1-antichymotrypsin-like serum inhibitor

Rob J. van Klaveren, Peter H. M. Hoet, Maurits Demedts and **Benoit Nemery** 605 Putrescine uptake in rat type II pneumocytes correlates with γ-glutamyltransferase activity

Seán Klinkradt, Ryno J. Naudé, Koji Muramoto and **Willem Oelofsen** 611 Purification and characterization of proteasome from ostrich liver

Subhash C. Jamdar and **Wang Fang Cao** 623 Effect of glutathione deficiency on the adipocyte Mg^{2+}-dependent phosphatidate phosphohydrolase

James B. Trager and **G. Steven Martin** 635 The role of the Src homology-2 domain in the lethal effect of Src expression in the yeast *Saccharomyces cerevisiae*

A. Mobasheri, A. C. Hall, J. P. G. Urban, S. J. France and **A. L. Smith** 649 Immunologic and autoradiographic localisation of the Na^+,K^+-ATPase in articular cartilage: upregulation in response to changes in extracellular Na^+ concentration

Ivan G. Ivanov, Adriana A. Saraffova and **Mounir G. Abouhaidar** 659 Unusual effect of clusters of rare arginine (AGG) codons on the expression of human interferon α1 gene in *Escherichia coli*

Sylvie Goenner, Claudine Cosson, Audrey Boutron, Alain Legrand and **Nicole Moatti** 667 Interleukin-1β and interleukin-6 stimulate 2-methylamino-isobutyric acid uptake in HepG2 cells

Zdzisław Bereznowski 675 Methacrylate upate by isolated hepatocytes and perfused rat liver

J. T. Guimarães, M. A. Vieira-Coelho, M. P. Serrão and **P. Soares-da-Silva** 681 Opossum kidney (OK) cells in culture synthesize and degrade the natriuretic hormone dopamine: a comparison with rat renal tubular cells

V. Neitchev, E. Kostova, M. Goldenberg and **L. Doumanova** 689 Kinetics and role of α_1-acid glycoprotein-dependent osmotic transport of water and ions in palmitoyl-L-oleoyl phosphatidylcholine liposomes

Short Communication

J. R. Mekkes, I. C. Le Poole, P. K. Das, A. Kammeyer and **W. Westerhof** 703 *In vitro* tissue-digesting properties of krill enzymes compared with fibrinolysin/DNAse, papain and placebo

Book Reviews 707

Vol 29, No. 5

Molecules in Focus

S. E. Stringer and **J. T. Gallagher** 709 Heparan sulphate

John S. Mort and **David J. Buttle** 715 Cathepsin B

Michael A. Horton 721 The αvβ3 integrin "vitronectin receptor"

Alexander V. Vorotnikov 727 Kinase-related protein: a smooth muscle myosin-binding protein

Reviews

Qiao Li, Örjan Wrange and **Per Eriksson** 731 The role of chromatin in transcriptional regulation

Sangduk Kim, In Kyoung Lim, Gil-Hong Park and **Woon Ki Paik** 743 Biological methylation of myelin basic protein: enzymology and biological significance

General Papers

Harshal H. Nandurkar, Lorraine Robb, Jillian K. Nicholl, Douglas J. Hilton, Grant R. Sutherland and **C. Glenn Begley** 753 The gene for the human interleukin-11 receptor alpha chain locus is highly homologous to the murine gene and contains alternatively spliced first exons

Vassiliki Avramopoulou, Smaragdi Antonopoulou, Dimitris Argyropoulos, Cleanthis Froussios and **Constantinos A. Demopoulos** 767 Synthesis of a new phosphoglycolipid with biological activity towards platelets

Shewan M. Aziz, Michal Toborek, Bernhard Hennig, Mark P. Mattson, Hongtao Guo and **David W. Lipke** 775 Oxidative stress mediates monocrotaline-induced alterations in tenascin expression in pulmonary artery endothelial cells

Taiping Chen and **Eppie D. Rael** 789 Purification of M5, a fibrinolytic proteinase from *Crotalus molossus molossus* venom that attacks complement

Yoichi Araki, Yoichi Sakakibara, Vijay Boggaram, Junko Katafuchi, Masahito Suiko, Hiroshi Nakajima and **Ming-Cheh Liu** 801 Tissue-specific and developmental stage-dependent expression of a novel rat Dopa/tyrosine sulfotransferase

Sanjay Awasthi, Sharad S. Singhal, Sanjay K. Srivas-Tava, Meena Chaubey, John T. Piper, Piotr Zimniak, C. Yallampalli, S. Rajaraman and **Yogesh C. Awasthi** 807 Rat GST 8-8 is expressed predominantly in myeloid origin cells infiltrating the gravid uterus

Andrzej Matecki, Maciej Stopa, Anna Was and **Tadeusz Pawelczyk** 815 Effect of sphingomyelin and its metabolites on the activity of human recombinant PLC δ1

Anthony R. Gendall, Ashley R. Dunn and **Matthias Ernst** 829 Isolation and characterization of a leukemia inhibitory factor-independent embryonic stem cell line

Roumiana Todorova 841 Generation of chromophore Tyr-containing mutants of the ribosomal protein L7/L12 from *Escherichia coli* by site-directed mutagenesis and characterization

A. Cámara-Artigas, A. Parody-Morreale and **C. Barón** 849 Analogous activation of bovine liver glycogen phosphorylase by AMP and IMP

Vol 29, No. 6

Molecules in Focus

Richard A. Robbins and **Matthew B. Grisham** 857 Nitric oxide

Josephine C. Adams 861 Thrombospondin-1

Peter J. Barnes 867 Nuclear factor-κB

Katherine Bowers, Carol Pitcher and **Mark Marsh** 871 CD4: a Co-receptor in the immune response and HIV infection

Review

Steven J. Fliesler and **R. Kennedy Keller** 877 Isoprenoid metabolism in the vertebrate retina

General Papers

Zsuzsa Izsvák, Zsolt Jobbágy, Imre Takács and **Ernö Duda** 895 Cloning and characterization of the genes of the *Ceq*I restriction–modification system

Annie Pardo, Karen Ridge, Bruce Uhal, J. Iasha Sznajder and **Moisés Selman** 901 Lung alveolar epithelial cells synthesize interstitial collagenase and gelatinases A and B *in vitro*

Mi Young Ahn, Byung Mu Lee and **Yeong Shik Kim** 911 Characterization and cytotoxicity of L-amino acid oxidase from the venom of king cobra (*Ophiophagus hannah*)

Kunihiko Izuishi, Hisao Wakabayashi, Taira Ohnishi, Hajime Maeta, Takashi Maeba and **Yoshiyuki Ichikawa** 921 Effects of an immunosuppressive agent, tacrolimus (FK-506), on the activities of cytochrome P-450-linked monooxygenase systems in rat liver microsomes

Vol 29, No. 7

Molecules in Focus

Ian Zachary 929 Focal adhesion kinase

Stephen P. Jackson 935 DNA-dependent protein kinase

Debra J. Romberger 939 Fibronectin

Michael J. Clemens 945 PKR—a protein kinase regulated by double-stranded RNA

Review

Ki-Young Lee, Zhong Qi, Ya Ping Yu and **Jerry H. Wang** 951 Neuronal Cdc2-like kinases: neuron-specific forms of Cdk5

General Papers

C. Gómez Lojero, B. Pérez-Gómez, D. W. Krogmann and **A. Peña-Diaz** 959 The tricylindrical core of the phycobilisome of the cyanobacterium *Arthrospira* (*Spirulina*) *maxima*

A. Waseem, K. White and **N. H. Waseem** 971 Identification of a novel keratin epitope: evidence for association between non-helical sub-domains L12 during filament assembly

Tomoyuki Terada 985 Characterization of multiple acid phosphatases in bovine liver cytosol and lysosome. Inactivation of cytosolic enzymes by disulfides and its redox regulation by thioltransferase

Robert Steadman, Patricia L. St John, Rachel A. Evans, Gareth J. Thomas, Malcolm Davies, Louis W. Heck and **Dale R. Abrahamson** 993 Human neutrophils do not degrade major basement membrane components during chemotactic migration

Roger F. Castilho, Joaquim A. F. Vicente, Alicia J. Kowaltowski and **Anibal E. Vercesi** 1005 4,6-Dinitro-*o*-cresol uncouples oxidative phosphorylation and induces membrane permeability transition in rat liver mitochondria

John W. Wiseman, L. Anne Glover and **John E. Hesketh** 1013 Evidence for a localisation signal in the 3′-untranslated region from vimentin messenger RNA

Biao He, Ji-Hong Bai and **Hai-Meng Zhou** 1021 Comparison of inactivation and unfolding of yeast alcohol dehydrogenase during thermal denaturation

Melanie R. Ziman, Susan Fletcher and **Peter H. Kay** 1029 Alternate *Pax*7 transcripts are expressed specifically in skeletal muscle, brain and other organs of adult mice

Antonio Núñez, Mercedes Castillo, José Iglesias, Marina Martínez-Cayuela, Dolores González-Pacanowska and **Eduardo García-Peregrín** 1037 Regulation of mevalonate 5-pyrophosphate decarboxylase in HeLa cells. Inhibition of enzymatic protein synthesis by serum lipoproteins

Vol 29, No. 8 & 9

Molecules in Focus

Hans-Peter Braun and **Udo Klaus Schmitz** 1043 The mitochondrial processing peptidase

Pia A. J. Huber 1047 Caldesmon

C. E. Edmead, J. R. Lamb and **G. F. Hoyne** 1053 The T cell surface protein, CD28

Shawn X. Leng and **Jack A. Elias** 1059 Interleukin-11

General Papers

Michael J. Sherratt, David F. Holmes, C. Adrian Shuttleworth and **Cay M. Kielty** 1063 Scanning transmission electron microscopy mass analysis of fibrillin-containing microfibrils from foetal elastic tissues

Jingxiong Wang, Tibor Vantus, Wilfried Merlevede and **Jackie R. Vandenheede** 1071 Identification and characterization of an auto-activating MEK kinase from bovine brain: phosphorylation of serine-298 in the proline-rich domain of the mammalian MEKs

Jun-Lin Guan 1085 Role of focal adhesion kinase in integrin signaling

Susana Correa García, Mariana Bermúdez Moretti, Eugenia Ramos and **Alcira Batlle** 1097 Carbon and nitrogen sources regulate δ-aminolevulinic acid and γ-aminobutyric acid transport in *Sacchcromyces cerevisiae*

Phillip A. Venter, Ryno J. Naudé, Willem Oelofsen and **Gerald E. Swan** 1103 Ovine cardiac Na,K-ATPase: isolation by means of selective solubilization in lubrol and the effect of 1α,2α-epoxyscillirosidin on this enzyme

S. G. Afonso, R. Enriquez de Salamanca and **A. M. del C. Batlle** 1113 Porphyrin-induced protein structural alterations of heme enzymes

Vol 29, No. 10

Molecules in Focus

Jan Rosing and **Guido Tans** 1123 Factor V

Benjamin L. J. Webb and **Christopher G. Proud** 1127 Eukaryotic initiation factor 2B (eIF2B)

Eleanor J. Mackie 1133 Tenascin-C

Fumio Sakane and **Hideo Kanoh** 1139 Diacylglycerol kinase

C. Adrian Shuttleworth 1145 Type VIII collagen

Review

Antonio De Flora, Lucrezia Guida, Luisa Franco and **Elena Zocchi** 1149 The CD38/cyclic ADP-ribose system: a topological paradox

General Papers

Christopher J. Jackson and **Minh Nguyen** 1167 Human microvascular endothelial cells differ from macrovascular endothelial cells in their expression of matrix metalloproteinases

Peter A. G. McCourt and **Stefan Gustafson** 1179 On the adsorption of hyaluronan and ICAM-1 to modified hydrophobic resins

C. Gómez-Lojero, B. Pérez-Gómez, G. Prado-Flores, D. W. Krogmann, A. Cárabez-Trejo and **A. Peña-Diaz** 1191 The phycobilisomes of the cyanobacterium *Arthrospira* (*Spirulina*) *maxima*

Magda Curto, Marco Piccinini, Ivana Rabbone, Silvia Mioletti, Michael Mostert, Renato Bruno, and **Maria T. Rinaudo** 1207 G proteins and regulation of pyruvate dehydrogenase activity by insulin in human circulating lymphocytes

Vol 29, No. 11

Molecules in Focus

Doyle A. Siever and **Harold P. Erickson** 1219 Extracellular annexin II

A. J. Ridley 1225 The GTP-binding protein Rho

David M. Center, Hardy Kornfeld and **William W. Cruikshank** 1231 Interleukin-16

P. A. Riley 1235 Melanin

Frank P. Luyten 1241 Cartilage-derived morphogenetic protein-1

Reviews

R. Nath 1245 Copper deficiency and heart disease: molecular basis, recent advances and current concepts

Robert V. Considine and **Jose F. Caro** 1255 Leptin and the regulation of body weight

General Papers

K. Shivakumar and **B. Prakash Kumar** 1273 Magnesium deficiency enhances oxidative stress and collagen synthesis *in vivo* in the aorta of rats

Jorge Suárez and **Victoria Chagoya de Sánchez** 1279 Inhibition of *S*-adenosyl-l-homocysteine hydrolase by adrenaline in isolated guinea-pig papillary muscles.

Gadi Borkow, Dominique Arion, Anne Noronha, Margherita Scartozzi, Masad J. Damha and **Michael A. Parniak** 1285 Inhibitory potency of R-region specific antisense oligonucleotides against *in vitro* DNA polymerization and template-switching reactions catalysed by HIV-1 reverse transcriptase

Witold Jakubowski and **Grzegorz Bartosz** 1297 Estimation of oxidative stress in *Saccharomyces cerevisiae* with fluorescent probes

Vol 29, No. 12

DIRECTED ISSUE: TRANSCRIPTION FACTORS

1303 Preface

Introductory Overview

David S. Latchman 1305 Transcription factors: an overview

Reviews

Luigi Lania, Barbara Majello and **Pasquale De Luca** 1313 Transcriptional regulation by the Sp family proteins

Stephan Tenbaum and **Aria Baniahmad** 1325 Nuclear receptors: structure, function and involvement in disease

Kaj Grandien, Anders Berkenstam and **Jan-Åke Gustafsson** 1343 The estrogen receptor gene: promoter organization and expression

Andrew D. Sharrocks, A. Louise Brown, Yan Ling and **Paula R. Yates** 1371 The ETS-domain transcription factor family

Ryoichiro Kageyama, Makoto Ishibashi, Koichi Takebayashi and **Koichi Tomita** 1389 bHLH transcription factors and mammalian neuronal differentiation

Shizuo Akira 1401 IL-6-regulated transcription factors

S. Morwenna Wood and **Peter J. Ratcliffe** 1419 Mammalian oxygen sensing and hypoxia inducible factor-1

Neil D. Perkins 1433 Achieving transcriptional specificity with NF-κB

Frederic G. Barr 1449 Chromosomal translocations involving paired box transcription factors in human cancer

Molecules in Focus

Alan P. Wolffe 1463 Histone H1

Nigel J. Brand 1467 Myocyte enhancer factor 2 (MEF2)

Colin D. Bingle 1471 Thyroid transcription factor-1

Original Papers

Mark S. Thomas, Chao Zou, Akira Ishihama and **Robert E. Glass** 1475 The effect of a nested set of C-terminal substituted deletions on the function of the α subunit of *Escherichia coli* RNA polymerase

Ning Gao, Eugene Han, Rebecca Scarr and **Kelvin Lam** 1485 DNA-dependent RNA Polymerase from *Enterobacter cloacae* is closely related to *Escherichia coli*

Jo L. Begbie and **David S. Latchman** 1493 The two activation domains of the Brn-3a transcription factor have distinct functional properties

Kevin Morgan and **Noor A. Kalsheker** 1501 Regulation of the serine proteinase inhibitor (SERPIN) gene α1-antitrypsin: a paradigm for other SERPINs

P. Brown and **A. S. McNeilly** 1513 Steroidogenic factor-1 (SF-1) and the regulation of expression of luteinising hormone and follicle stimulating hormone b-subunits in the sheep anterior pituitary *in vivo*

Chulin Xia, John K. Cheshire, Himakshi Patel and **Patricia Woo** 1525 Cross-talk between transcription factors NF-κB and C/EBP in the transcriptional regulation of genes